



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,798	04/18/2007	Piero Losi	07040.0262-00000	3422
22852	7590	01/23/2009		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413				
EXAMINER FISCHER, JUSTIN R				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
01/23/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/584,798

Applicant(s)

LOSI ET AL.

Examiner

Justin R. Fischer

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/ICE)
Paper No(s)/Mail Date 062806
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 35-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda (JP 53080602) and Ohashi. As best depicted in Figure 2, Fukuda teaches a pneumatic tire construction having a tread formed of a first elastomeric material 6 and a second elastomeric material 5 (individual sectors separated by regions of first elastomeric materials), wherein said first elastomeric material is included in a groove section of the tread. The reference further teaches that the first elastomeric material provides higher wear resistance than the second elastomeric material. While the reference fails to expressly disclose the claimed modulus, one of ordinary skill in the art at the time of the invention would have recognized such a disclosure as teaching a higher modulus for the first elastomeric material. Ohashi provides one example of a similar tire design in which a rubber composition having a higher modulus is used in combination with a second elastomeric material in order to, among other things, provide improved wear/abrasion resistance. Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to use first and second elastomeric materials satisfying the claimed invention.

In such an instance, the first elastomeric material of Ohashi has a modulus of elasticity (at room temperature) of approximately 19.0 MPa, which is seen to constitute "about" 20 MPa. Also, one of ordinary skill in the art at the time of the invention would have expected the compressive modulus of the respective elastomeric compositions to be on the same order as those detailed above and applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed absolute values (tensile and compressive modulus are approximately equal to one another in rubber compositions).

Regarding claim 36, Ohashi suggests a second elastomeric material having a modulus of elasticity (at room temperature) between approximately 6 and 14 MPa, which is almost identical to the claimed invention.

With respect to claims 35 and 37-39, Ohashi is directed to a wide variety of embodiments in which the respective moduli satisfy the broad ranges of the claimed invention and applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed ranges.

With respect to claims 40-43, the claimed ranges are extremely broad and include relative language to define their lower and upper limits ("about"). Additionally, the claimed values are consistent with those commonly associated with tire components, including tread compositions. Absent any conclusive showing of unexpected, one of ordinary skill in the art at the time of the invention would have found it obvious to use compositions having the claimed hardness. It is emphasized that hardness values would be expected to be in the range of at least 50 and a difference of

at least 10 percent, more preferably at least 15percent, suggests a hardness difference on the order of at least 5, which is consistent with rubber compositions having different moduli and hardness (as is the case in Fukuda).

As to claim 44, grooves are formed within first sectors 6.

Regarding claim 45, said first sectors extend over the entire thickness of the tread.

With respect to claims 46-49, whether or not the base portions of the first or second elastomeric material are connected to one another (and thus define an "additional layer") does not appear to be critical to the inventive concept of Fukuda. It is emphasized that the primary concern of Fukuda is in the inclusion of a first elastomeric material in the vicinity of the groove sections in order to improve wear/abrasion resistance. One of ordinary skill in the art at the time of the invention would have readily appreciated an arrangement in which the base portions of respective first sectors or second sectors are connected to one another. In this instance, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed thickness of the connecting portion. Lastly, it is emphasized that tread/cap and similar multi-layered tread designs are commonly formed with a wide variety of arrangements, including ones in which a ground contacting rubber is connected within the tire to define an underlayer.

With respect to claim 50, said first sector has a width greater than a width of the groove.

As to claim 51, the figures generally depict the first sectors as having a slightly greater width than the corresponding grooves- such a depiction appears to be consistent with the broad range of the claimed invention (difference of between 4-10 mm) and applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed arrangement.

Regarding claim 52, the grooves have a depth that extends beyond the meridian plane of the first sectors.

3. Claims 53-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda and Ohashi as applied in claim 53 above and further in view of Caretta (US 6,635,132). As detailed above, Fukuda describes a tire construction comprising first and second sectors that define the tread, wherein said sectors are independent of one another. While the reference is silent as to the specific manufacturing method, the claimed method including a first and second delivery member is consistent with known tire manufacturing methods, as shown for example by Caretta (Figures 1 and 4). The reference further teaches that the robotized arm 16 can be used to position a toroidal support or drum in front of a plurality of extruders and such a method is applicable to a wide variety of tire components, including tire tread bands (Column 8, Lines 7+). In this instance, said plurality of extruders are associated with the deposition of said first and second sectors. Additionally, Figure 4 expressly depicts a method in which the toroidal support is rotated around the axis of rotation (rotation around axis X) and moved along a direction substantially parallel to a rotation axis of the toroidal support (movement around axis E).

One of ordinary skill in the art at the time of the invention would have found it obvious to position the first and second sectors of Fukuda on a toroidal support using the method described Caretta as it is consistent with the known manufacturing methods and applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed manufacturing method.

As to claim 61, the tire construction of Fukuda in view of Caretta would include a plurality of coils (first and second sectors) axially arranged side by side.

With respect to claim 62, any toroidal support or drum can be viewed as being "substantially" rigid.

Regarding claims 63-68, as detailed above, one of ordinary skill in the art at the time of the invention would have found it obvious to form the first or second sectors (at the base regions) as a continuous tire component- such a construction is consistent with the conventional manner in which tread/cap designs and other multi-layer tread designs are manufactured. It is further noted that applicant has not provided a conclusive showing of unexpected results to establish a criticality for the manufacture of a continuous component comprising either one of the first or second sectors (particularly evident in view of the fact that both embodiments are claimed).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer
/Justin R Fischer/
Primary Examiner, Art Unit 1791
January 21, 2009